

CLAIMS

That which is claimed is:

1. A method for detecting a cancerous colon cell comprising:
contacting a sample obtained from a test colon cell with a probe for detection of a gene product of a gene differentially expressed in colon cancer, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS: 1-1303, said contacting being for a time sufficient for binding of the probe to the gene product; and
comparing a level of binding of the probe to the sample with a level of probe binding to a control sample obtained from a control colon cell, wherein the control colon cell is of known cancerous state;
wherein an increased level of binding of the probe in the test colon cell sample relative to the level of binding in a control sample is indicative of the cancerous state of the test colon cell.
2. The method of claim 1, wherein the probe is a polynucleotide probe and the gene product is nucleic acid.
3. The method of claim 1, wherein the gene product is a polypeptide.
4. The method of claim 1, wherein the gene product is immobilized on an array.
5. The method of claim 1, wherein the probe is immobilized on an array.
6. A method for assessing the cancerous phenotype of a colon cell comprising:
detecting expression of a gene in a test colon cell sample, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NOS: 1-1303; and
comparing a level of expression of the gene in the test colon cell sample with a level of expression of the gene in a control cell sample;

wherein comparison of the level of expression of the gene in the test cell sample relative to the level of expression in the control cell sample is indicative of the cancerous state of the test cell sample.

7. The method of claim 6, wherein detection of expression of the gene is by detecting a level of an RNA transcript in the test colon cell sample.

8. The method of claim 6, wherein detection of expression of the gene is by detecting a level of a polypeptide in the test colon cell sample.

9. A method for suppressing or inhibiting a cancerous phenotype of a cancerous cell comprising introducing into a mammalian cell an antisense polynucleotide for inhibition of expression of a gene comprising a sequence selected from the group consisting of SEQ ID NOS: 1-1303, wherein inhibition of expression of the gene suppresses or inhibits development of a cancerous phenotype in the cell.

10. The method of claim 9, wherein the cancerous phenotype is metastasis.

11. The method of claim 9, wherein the cancerous phenotype is aberrant cellular proliferation relative to a normal cell.

12. The method of claim 9, wherein the cancerous phenotype is loss of contact inhibition of cell growth.

13. A method for assessing the tumor burden of a subject, the method comprising:
detecting a level of a differentially expressed gene product in a test sample from a subject suspected of or having a tumor, the differentially expressed gene product comprising a sequence selected from the group consisting of SEQ ID NOS: 1-1303;

wherein detection of the level of the gene product in the test sample is indicative of the tumor burden in the subject.

14. A method for identifying a gene product as a target for a cancer therapeutic, the method comprising:

contacting a cancerous cell expressing a candidate gene product with an anti-cancer agent, wherein the candidate gene product corresponds to a sequence selected from the group consisting of SEQ ID NOS: 1-1303; and

analyzing the effect of the anti-cancer agent upon a biological activity of the candidate gene product and upon a cancerous phenotype of the cancerous cell;

wherein modulation of the biological activity of the candidate gene product and modulation of the cancerous phenotype of the cancerous cell indicates the candidate gene product is a target for a cancer therapeutic.

15. The method of claim 14, wherein the cancerous cell is a cancerous colon cell.

16. The method of claim 14, wherein the inhibitor is an antisense oligonucleotide.

17. The method of claim 14, wherein the cancerous phenotype is aberrant cellular proliferation relative to a normal cell.

18. The method of claim 14, wherein the cancerous phenotype is colony formation due to loss of contact inhibition of growth.

19. A method for identifying agents that decrease biological activity of a gene product differentially expressed in a cancerous cell, the method comprising:

contacting a candidate agent with a differentially expressed gene product, the differentially expressed gene product corresponding to a sequence selected from the group consisting of SEQ ID NOS: 1-1303; and

detecting a decrease in a biological activity of the gene product relative to a level of biological activity of the gene product in the absence of the candidate agent.

20. The method of claim 19 wherein said detecting is by detection of a decrease in expression of the differentially expressed gene product.

21. The method of claim 20 wherein the gene product is mRNA or a cDNA prepared from the mRNA gene product.

22. The method of claim 20, wherein the gene product is a polypeptide.

23. A method of inhibiting growth of a tumor cell by modulating expression of a gene product, the gene product being encoded by a gene identified by a sequence selected from the group consisting of: SEQ ID NOS:1-1303.